

CLAIMS

1. A display panel, wherein an electroconductive polymer layer is arranged between a display unit and a light source of a back light system.
2. The display panel according to claim 1, wherein the electroconductive polymer layer is an electroconductive polymer layer stacked on a polymer film.
3. The display panel according to claim 1, wherein the surface resistivity of the electroconductive polymer layer is  $1 \times 10^4 \Omega/\square$  or less, and the total light transmittance thereof is 80% or more.
4. The display panel according to claim 3, wherein the surface resistivity of the electroconductive polymer layer is  $5 \times 10^3 \Omega/\square$  or less, and the total light transmittance thereof is 85% or more.
5. The display panel according to claim 1, wherein the spectral light transmittance at 400 nm wavelength of the electroconductive polymer layer is 85% or more.

6. The display panel according to claim 1, wherein an electroconductive polymer contained in the electroconductive polymer layer is a polymer selected from the following group i) or ii):

- i) pyrrole, thiophene, furan, selenophene, aniline, para-phenylene and fluorene polymers or copolymers, or derivatives thereof; and
- ii) polymers to which solubility or dispersibility is given by introducing a side chain into thiophene, alkylfluorene, fluorene, para-phenylene, and para-phenylenevinylene polymers or copolymers, or derivatives thereof.

7. The display panel according to claim 6, wherein the electroconductive polymer is a thiophene polymer or copolymer, or a derivative thereof.

8. The display panel according to claim 7, wherein the thiophene polymer or copolymer, or the derivative thereof is polyethylenedioxythiophene.

9. The display panel according to claim 6, wherein the electroconductive polymer layer further comprises polystyrenesulfonic acid.

10. The display panel according to claim 1, wherein the thickness of the electroconductive polymer layer is 60 nm or more and 300 nm or less.

11. The display panel according to claim 1, wherein particles are incorporated into the electroconductive polymer layer.

12. The display panel according to claim 1, which further comprises a layer having a light scattering performance.

13. The display panel according to claim 1, which further comprises a layer having a brightness enhancement performance.

14. The display panel according to claim 1, wherein the display unit is a display unit using liquid crystal and the back light system is of a type using a cold cathode fluorescent lighting.

15. A back light system, which is of a type using a cold cathode fluorescent lighting and has an arranged electroconductive polymer layer.